Audit Report

YEAR 2000 POSTURE OF MID-TIER COMPUTER SYSTEMS
PROCESSING DEFENSE FINANCE AND
ACCOUNTING SERVICE DATA

Report Number 99-227   July 29, 1999

Office of the Inspector General
Department of Defense

Acronyms

DFAS	Defense Finance and Accounting Service
DISA	Defense Information Systems Agency
Y2K	Year 2000

July 29, 1999

MEMORANDUM FOR DIRECTOR, DEFENSE FINANCE AND ACCOUNTING
SERVICE

SUBJECT: Audit Report on Year 2000 Posture of Mid-Tier Computer Systems
Processing Defense Finance and Accounting Service Data
(Report No. 99-227)

We are providing this audit report for information and use. This report is one in a
series of reports that the Inspector General, DoD, is issuing in accordance with an
informal partnership with the DoD Chief Information Officer to monitor the Defense
Finance and Accounting Service efforts in addressing the year 2000 computing challenge.
We considered management comments on a draft of this report when preparing the final
report.

The Defense Finance and Accounting Service comments conformed to the
requirements of DoD Directive 7650.3; therefore, additional comments are not required.

We appreciate the courtesies extended to the audit staff. Questions on the audit
should be directed to Ms. Kimberley A. Caprio at (703) 604-9139 (DSN 664-9139)
(kcaprio@dodig.osd.mil) or Mr. Dennis L. Conway at (703) 604-9158 (DSN 664-9158)
(dconway@dodig.osd.mil). See Appendix F for the report distribution. The audit team
members are listed inside the back cover.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Report No. 99-227   **July 29, 1999**
  (Project No. 9FG-9009)

Year 2000 Posture of Mid-Tier Computer Systems
Processing Defense Finance and Accounting Service Data

Executive Summary

Introduction. This report is one in a series of reports that the Inspector General, DoD, is issuing in accordance with an informal partnership with the DoD Chief Information Officer to monitor DoD efforts in addressing the year 2000 computing challenge. The prior reports issued by the Inspector General, DoD, are listed in Appendix B.

Objectives. The overall audit objective was to assess whether multi-user, medium-sized computers (mid-tier computers) processing Defense Finance and Accounting Service (DFAS) data would operate properly after December 31, 1999. Specifically, we evaluated efforts taken through March 1999 to ensure that mid-tier computer systems and their software were Year 2000 compliant.

Results. DFAS managers were aware of and actively involved in achieving compliance with the DoD Year 2000 Management Plan. However, as of March 1999, DFAS could not be fully assured that mid-tier computer systems would be Year 2000 compliant because of the following:

- the inventory was not updated for mid-tier computer systems,

- test plans were not always detailed or the results of testing documented for mid-tier computer systems,

- managers and users of systems that interface with DFAS mid-tier computer systems needed to be more involved in contingency planning, and

- five systems were not yet certified as being tested on Year 2000 compliant mid-tier computers.

For details of the audit results, see the Finding section of the report.

Summary of Recommendations. We recommended that DFAS periodically reconcile and update its inventory of mid-tier computer systems, develop Year 2000 test plans for mid-tier computer systems to include systems' interfaces, and certify that mid-tier computer systems are tested on Year 2000 compliant mid-tier computers.

Management Action and Comments. The DFAS Director, Information and Technology concurred with reconciling and updating the inventory of mid-tier computer systems and certifying those systems for Year 2000 compliance. He provided information indicating further DFAS progress through early June 1999. All of the systems reviewed during the audit are now certified. The Director partially concurred with developing test plans and nonconcurred with including cost estimates in contingency plans. A discussion of management comments is in the Finding section of the report, and the complete text is in the Management Comments section.

Audit Response. The DFAS comments were responsive. We agree with DFAS that, if all of the systems operating on mid-tier computer systems have been tested and certified, standardizing the testing procedures is no longer feasible. The portion of the recommendation related to standardized procedures has been deleted. Further, based on the fact that the DoD Y2K office told DFAS that the DoD Y2K Management Plan requirement to identify costs for "each" potential contingency was not practical (because of the vast number of potential contingencies that could occur and because it is too late in the fiscal year to program additional funds for the high risk contingencies), the related recommendation has also been revised. We agree that DFAS has a fundamentally sound approach for minimizing Y2K risk to operations that depend on mid-tier computer system and platforms. No further management comments are required.

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Background

The Year 2000 Problem. Computer systems have typically been designed to use only the last two digits for the year; thus, the year 2000 (Y2K) is indistinguishable from 1900. As a consequence, computers and associated software that use dates to calculate, compare, and sort data could generate incorrect results when working with years after 1999. The potential for computer system failure after the year 1999 is often referred to as the Y2K problem.

Classifications of DoD Computer Systems. Depending on physical size, computing speed, and processing capabilities, DoD computer systems are generally classified into three categories: mainframe, mid-tier, and personal computer systems.

- Mainframe computers are considered the largest and most powerful category of general-purpose computers. Mainframes are typically housed in a specialized environment that provides for specific temperature, humidity, and electrical power requirements. Mainframes can process several applications at a time and can simultaneously support hundreds of users. The Defense Information Systems Agency (DISA) owns many mainframe computers and operates them within facilities called megacenters.

- Mid-tier computers are often called mini-computers and are less powerful than mainframes. Mid-tier computers have many of the operational characteristics and capabilities of mainframe computers. Unlike mainframes, mid-tiers do not require a specialized environment and are commonly operated in a typical business office setting. As of March 1, 1999, the Defense Finance and Accounting Service (DFAS) reported that it had 33 systems using mid-tier computers.

- Micro computers (personal computers) are lower in price and performance than mainframe or mid-tier computers. By adding a modem and communications software, a micro computer can also serve as an interface with other computers.

Appendix C provides technical or uncommon computer-related terms used in this report.

Implementation of Y2K Corrective Actions. The Office of Management and Budget established a target date of March 31, 1999, for implementing all Y2K corrective actions in all systems. The guidance was issued in a January 1998 memorandum for the heads of executive departments and agencies. In June 1998, the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), who is also the DoD Chief Information Officer, revised the target implementation date for all DoD mission-critical computer systems to December 31, 1998.

DFAS Y2K Strategy. DFAS made the Y2K problem its highest information management priority. The overall goal for DFAS was to provide an organization-wide, coordinated effort that ensures that no system is adversely affected by Y2K problems.

During our review, DFAS was using guidance in the "Defense Finance and Accounting Service Year 2000 Management Plan," December 1997, version 1.0, and the "DoD Year 2000 Management Plan," version 2.0, December 1998.

Objectives

The overall audit objective was to assess whether multi-user, medium-sized computers (mid-tier computers) processing DFAS data would operate properly after December 31, 1999. We evaluated efforts taken to ensure that mid-tier computer systems and their software were Y2K compliant. See Appendix A for a discussion of the audit scope and methodology and Appendix B for a summary of prior audit coverage.

Year 2000 Posture of Mid-Tier Computer Systems Processing Defense Finance and Accounting Service Data

DFAS could not be fully assured that mid-tier computer systems processing DFAS data would be Y2K compliant because:

- the inventory of mid-tier computer systems needed to be fully reconciled and updated;

- test plans needed to be developed and results of testing documented for mid-tier computer systems;

- contingency plans needed to be revised to incorporate cost estimates for mid-tier computer systems; and

- mid-tier computer systems needed to be certified as being tested on Y2K compliant mid-tier computers.

As a result, DFAS needed additional effort to mitigate risk that its mid-tier computer systems would not successfully process Y2K-related data.

DoD Plans to Reduce Risks of Y2K Failure

Plans for Addressing Y2K Deficiencies. The "DoD Year 2000 Management Plan," version 2.0, December 1998, requires DoD organizations to use the process that the Office of Management and Budget directed to minimize the risks of systems failing in Y2K. DFAS issued version 2.0 of its management plan, in May 1999, which focused on ensuring that no DFAS systems fail because of Y2K problems. The DFAS plan addressed the following:

- promoting Y2K awareness across the entire organization;

- inventorying all systems and assessing problems;

- replacing, repairing, or terminating systems to ensure Y2K compliance;

- testing and certifying systems for Y2K compliance; and

- deploying renovated and replacement systems.

Reviews on DFAS Progress in Reducing Potential Y2K Deficiencies. This audit assessed the actions that DFAS took through March 1999 to reduce the potential Y2K deficiencies of systems operating on mid-tier computer systems. We reviewed 17 of 33 systems operating on mid-tier computers (7 of the 17 systems were classified by DFAS as mission-critical). Appendix D provides a description of each system reviewed.

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DFAS Progress in Managing Y2K Problems

DFAS managers were actively pursuing compliance with the DoD Y2K Management Plan. However, DFAS needed to reduce the risks of system failure in Y2K by taking additional actions with regard to mid-tier computer systems. Those actions included the following:

- reconciling and updating, with DISA, the inventory of systems using mid-tier computers;

- developing more detailed test plans and documenting results of testing for mid-tier computer systems;

- involving managers and users of systems interfacing with DFAS systems in contingency planning; and

- ensuring that systems using mid-tier computers were certified as having been tested on Y2K-compliant mid-tier computers.

Reconciling and Updating the Inventory of Systems. DFAS and DISA had not fully reconciled and updated the inventory of mid-tier computer systems. A complete inventory would provide greater assurance that all systems operating on mid-tier computers have been identified and considered for Y2K compliance.

The DFAS Y2K Management Plan states that an inventory of DFAS systems will be developed to facilitate performing Y2K assessments. We requested that DFAS provide an inventory of its mid-tier computer systems and, as of November 24, 1998, DFAS provided a list of 19 systems. However, as of March 1, 1999, DFAS had changed its inventory to 33 mid-tier computer systems, to include systems under development. The 33 systems resulted from DFAS adjusting its inventory by removing 10 systems and adding 24 systems.

Because of the significant adjustments, we attempted to verify the accuracy of the DFAS inventory. We obtained an inventory, as of March 1, 1999, of DFAS systems from DISA. The DISA inventory included six DFAS mid-tier computer systems that were not recorded on the DFAS inventory. In addition, we identified two DFAS mid-tier computer systems that were not on either the DFAS or DISA inventories. The two systems were a part of six systems reviewed in this audit that processed data on mid-tier computer systems interfacing with the Mechanization of Contract Administration Services system[1]. (The DFAS inventory contained four of the six systems, and the DISA inventory identified two of the six systems.)

Both DFAS and DISA need to reconcile and update their inventories periodically. Updating the inventories will provide greater assurance that all DFAS mid-tier

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[1] The six DFAS systems that interfaced with the Mechanization of Contract Administration Services system were the Prevalidation Management Information Reporting System, the Contractor Invoice Service, the Contract Reconciliation System, the Entitlement Automation System, the Electronic Document Management System, and the Unmatched Disbursement Reconciliation System.

computer systems are identified for Y2K reporting and compliance with the DoD Y2K Management Plan. The table in Appendix E shows the inventories of DFAS mid-tier computer systems as of March 1, 1999.

Plans for Testing DFAS Systems Using Mid-Tier Computers. DFAS had not developed adequate plans for conducting "systems-level" testing on 7 of 17 mid-tier computer systems[2]. For those systems, DFAS system managers had not prepared detailed test plans that included the identification of system interfaces, testing of remote sites, or specific test conditions.

One of the objectives in the DoD Y2K Management Plan is to ensure that testing is conducted to validate that systems are Y2K compliant and perform as intended. The extent of Y2K testing and documentation of the test plans and test results varied for the 17 systems reviewed. For example, some system managers worked with users and conducted tests on the users' systems, while other system managers used only tests conducted by programmers to ensure that a system was Y2K compliant.

For example, the Defense Business Management System was identified as being critical to the DFAS mission. However, Y2K test plans developed for the system did not include criteria for testing or methods for correcting deficiencies. Also, the test results were not consistently documented to ensure that the criteria for testing the system were achieved. Although DFAS financial specialists developed criteria and scenarios for testing the system and its interfacing systems, they had no guidance, such as standardized Y2K testing procedures. In addition, although the Defense Business Management System manager was aware that the test plans did not fully follow the DoD Y2K Management Plan procedures, no plans had been made for comparing actual test results with expected results.

Without planning for proper and timely testing of mid-tier computer systems, DFAS would increase its risk of potential data contamination. By developing and documenting test plans and results, DFAS would facilitate analysis of those results and of remaining risk of system failures.

Planning for Y2K Contingencies. The DoD Y2K Management Plan requires the development of contingency plans to ensure the continuity of an organization's processes. Also, the DoD Y2K Management Plan requires cost estimates to be developed for each contingency and information on contingencies to be exchanged with system users and managers of interfacing systems.

During the audit, we determined that DFAS had developed contingency plans for all but two of the systems reviewed: the Transportation Support System and the Departmental Financial Reporting and Reconciliation System. However, only the plan for the Defense Business Management System included cost estimates for each potential contingency. In addition, only 3 of the 17 contingency plans had evidence of involvement by system users or managers outside of the DFAS office responsible for the system.

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[2] The seven systems were the Defense Business Management System, the Military Traffic Management Command-Financial Management System, and five of six DFAS systems interfacing with the Mechanization of Contract Administration Services system.

It is important for DFAS to prepare complete contingency plans that include cost estimates and involve system users or managers that have interfaces with the systems using mid-tier computers. The plans would provide insurance against the many possible types of Y2K disruptions and would ensure that plans are in place to expedite the restoration of a system.

Certifications of Systems as Y2K Compliant. DFAS did not ensure that:

- systems that operate on mid-tier computers were certified as Y2K compliant,

- monthly reports were supported by certifications, and

- systems using mid-tier computers were certified as being tested on Y2K-compliant mid-tier computers.

According to the DoD Y2K Management Plan, developers and maintainers of systems and the personnel using the systems must certify and document that each system complies with DoD Y2K requirements.

Management Certifications on Systems Tested. As of March 5, 1999, 5 of the 17 systems using mid-tier computer systems were not certified as Y2K compliant. The DoD Y2K Management Plan provided a deadline of September 30, 1998, for certifying mission-critical systems as Y2K compliant and a deadline of January 31, 1999, for certifying all other systems.

For the 12 certified systems, the system manager, the project manager, and the user had signed a checklist confirming that testing had occurred and that the test results proved the system was compliant. (That procedure was consistent with requirements in the DoD Y2K Management Plan.) The 12 systems had been certified based on testing conducted by either DFAS, a contractor, or the Joint Interoperability Test Command.

Of the five uncertified systems, DFAS classified the Defense Business Management System as being critical to its mission. However, DFAS was not planning to re-conduct tests on that mission-critical system; therefore, the system was to move to the next stage of testing—end-to-end testing—in June 1999 without being certified.

As of March 5, 1999, a module of the Departmental Financial Reporting and Reconciliation System (which resides on a mid-tier computer), the Transportation Support System, and two systems that interface with the Mechanization of Contract Administration Services system had not been certified as Y2K compliant. For the Transportation Support System, the interface agreement had not been created or the interface tested; therefore, the system manager was not able to certify the system. The two systems interfacing with the Mechanization of Contract Administration Services system were in the process of being tested; therefore, the systems were not certified.

Y2K Certifications in DFAS Managers' Checklists Compared With DFAS Y2K Monthly Status Reports. Inconsistencies existed between the levels of Y2K certification shown in the checklists that DFAS managers completed and the DFAS Y2K monthly status report. (The DFAS Y2K monthly status report was a compilation of the information collected from the Directors of the DFAS Centers.)

Certification levels were not shown in the monthly status report or in a checklist for 5 of the 17 systems in this review. For the 12 systems with certifications, we compared the level of certification in managers' checklists with the certification in the DFAS Y2K status report for the month of February 1999. It is critical that the proper certification levels for systems be shown in the DFAS Y2K status report because the report is forwarded to the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) and is consolidated for overall DoD reporting to the Office of Management and Budget.

For the 12 systems with checklists containing DFAS certifications of Y2K compliance, 3 of the checklists indicated that the system was tested on a mid-tier computer system that was Y2K compliant. Those three systems were the Defense Joint Accounting System, the Industrial Fund Accounting System, and the Standard Material Accounting System. The three systems are listed under the DFAS checklist heading and have a level 3 certification (see the Table in this finding). A level 3 certification indicates that the system and its interfaces were compliant and the system was tested on mid-tier computer systems that were compliant. However, the DFAS monthly report shows nine mid-tier computer systems that were certified as Y2K compliant and were tested on a mid-tier computer that was Y2K compliant. (Those nine systems are indicated by a "3" under the DFAS Monthly Report heading.)

In addition, the DFAS monthly report indicated that two mid-tier computer systems were Y2K compliant, but they were not certified as having been tested on a Y2K-compliant mid-tier computer.[3] Those two systems were the Unmatched Disbursement Reconciliation System and the Standard Accounting and Reporting System. However, the DFAS managers' checklists showed that nine systems were compliant, but they were not certified as being tested on a Y2K-compliant mid-tier computer.

DFAS needed to reconcile its monthly report with its managers' certifications. If the level of certification changes, DFAS managers should document the change and the reason for the change in their checklist and update the monthly report. The data shown in the monthly report directly impacts on the accuracy of data that DoD uses to report to the Office of Management and Budget.

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[3] The DFAS Y2K Management Plan, issued in May 1999, defines a system certified at level 2 as being Y2K compliant, to include the system's interfaces. However, the tests made on a system at level 2 were not performed in a Y2K-compliant environment.

DFAS and DoD Y2K Certification Levels

| | Certification Level | | | |
| | Checklist | | Monthly Report | |
System Name	DFAS[1]	DoD[2]	DFAS[1]	DoD[2]
1. Computerized Accounts Payable System	2	2a	none[3]	none
2. Defense Business Management System	none	none	none	none
3. Departmental Financial Reporting and Reconciliation	none	none	none	none
4. Defense Joint Accounting System	3	3a	3	3a
5. Defense Working Capital Accounting System-Defense Automated Printing Service	2	1b	3	1a
6. Defense Working Capital Accounting System-Public Works Centers	2	1b	3	1a
7. Industrial Fund Accounting System	3	3a	3	1b
8. Contractor Invoice Service[5]	none	none	none	none
9. Contract Reconciliation System[5]	2	none	none	none
10. Entitlement Automation System[5]	2	none	3	1a
11. Electronic Document Management Program[5]	none	none	none	none
12. Prevalidation Management Information Reporting System[5]	2	none	3	1a
13. Unmatched Disbursement Reconciliation System[5]	2	none	2	1a
14. Military Traffic Management Command-Financial Management System	2[4]	none	3	2b
15. Standard Materiel Accounting System	3	1b	3	1a
16. Standard Accounting and Reporting System	2	1a	2	1b
17. Transportation Support System	none	none	none	none

[1]The DFAS Y2K Management Plan has two levels of certification:
    (Level 1 certification is no longer used.)
    Level 2 = system and interfaces are compliant and testing was not in a compliant environment.
    Level 3 = system and interfaces are compliant and testing was made in compliant environment.
[2]The DoD Y2K Management Plan includes the following levels of certification:
    Level 1 = full independent testing of the system; Level 2 = independent audit of the system.
    Level 3 = self-certification of the system; "a" = four-digit year; "b" = two-digit year.
[3]None = certification level was not reported in the monthly report, and no checklist existed.
[4]Certification level reported by Army management.
[5]The systems are used by DFAS and interface with the Mechanization of Contract Administration Services system.

Management Actions

DFAS took several actions toward complying with DoD Y2K requirements before and during this audit. Those actions will lower the risk of system failure.

Making Mid-Tier Computers Y2K Compliant. We compared the versions of software installed on mid-tier computer systems at the DFAS Indianapolis Center with the modified Y2K-compliant versions suggested by the mid-tier manufacturer. With the exception of two Sun Microsystems, Incorporated, mid-tier computers, all of the proper software modifications were installed. Based on our recommendation, the DFAS Indianapolis Center personnel installed the correct versions of software and removed a noncompliant compiler. (A compiler translates instructions to a computer [from a human-readable language into a language understood by the computer] so that the computer can read, interpret, and perform the desired actions.)

Establishing Agreements for Interfaces With DFAS Systems. As required by the DFAS Y2K Management Plan, DFAS established agreements with all required organizations interfacing with the 17 systems reviewed. Completion of the interface agreements was important because the success of DFAS finance and accounting operations depend on the proper and timely exchange of data with others.

DFAS systems interface internally with hundreds of other DFAS systems and externally with Military Departments, DoD Components, and various Federal Government systems. DFAS receives an estimated 80 percent of the data used in finance and accounting processes from non-DFAS systems. Therefore, the completion of the system interfaces would contribute to the success of the DFAS Y2K compliance program and toward reducing the risk of Y2K problems.

Management Certifications of Systems. During this audit, DFAS continued to certify its mid-tier computer systems. The DFAS Y2K monthly status report for March 1999 showed that 15 of the 17 systems, using mid-tier computer systems, reviewed during this audit had been certified. Only the Contractor Invoice Service and the Computerized Accounts Payable System for Windows were not certified.

Implementation of Systems. For 5 of the 17 systems reviewed during this audit, DFAS had not implemented Y2K corrective actions by the target date of March 1, 1999. One of the five systems, the Standard Materiel Accounting System, is mission-critical. It was scheduled for implementation on June 30, 1999. The other four systems were classified as nonmission-critical systems. Those systems—the Computerized Accounts Payable System for Windows, the Departmental Financial Reporting and Reconciliation System, the Defense Joint Accounting System, and the Contractor Invoice Service—were scheduled for implementation by April 15, 1999; July 31, 1999; May 1, 1999; and April 30, 1999, respectively. According to DFAS, all of these systems are certified and implemented as of July 31, 1999.

Conclusion

Managers of the systems that run on mid-tier computers were aware of the Y2K status on each of the systems and were actively engaged in ensuring Y2K compliance. Additional actions were needed at the time of the audit to minimize potential risks and provide greater assurance that DFAS systems on mid-tier computers are Y2K compliant. Those specific actions and other efforts are responsive to our concerns.

Recommendations, Management Comments, and Audit Response

We recommend that the Director, Defense Finance and Accounting Service:

1. Periodically reconcile and update the Defense Finance and Accounting Service inventory of systems that operate on mid-tier computers with the Defense Information Systems Agency inventory.

DFAS Comments. DFAS concurred with the recommendation, and as of June 4, 1999, DFAS stated that corrective actions were in progress. The Director, Information and Technology, stated that DFAS was working with the Defense Information Systems Agency to reconcile and update the inventories.

2. Develop test plans for mid-tier computer systems, including plans for testing interfaces as follows:

a. Develop test plans and conduct tests for untested systems, or

b. Compare actual test results with expected results to determine whether tests were successful; if the tests were unsuccessful, conduct additional testing until desired results are achieved.

DFAS Comments. DFAS partially concurred, and as of June 4, 1999, DFAS stated that test plans were updated based on audit results; however, DFAS deemed that it was too late to standardize testing procedures because systems were already tested and certified, as specified in the draft audit recommendations.

Audit Response. We consider the comments responsive. We agree that, if all of the mid-tier computer systems have been tested and certified, standardizing the testing procedures is no longer feasible. We have revised the recommendation. Additional comments are not required.

3. Ensure contingency planning involves system users or managers that have interfaces with the Defense Finance and Accounting Service systems using mid-tier computers.

DFAS Comments. DFAS nonconcurred with the draft report recommendation, which also addressed cost estimates for contingency plans. DFAS stated that the

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DoD Y2K office agreed that the requirement of identifying costs for each potential contingency (which was referenced in the DoD Y2K Management Plan) was not practical. But DFAS did agree, as of June 4, 1999, to make a special effort toward emphasizing the importance of coordinating and providing information to its interfacing partners.

Audit Response. We deleted the portion of the recommendation related to cost estimates for contingency plans, which we agree are not essential. The DFAS comments were responsive regarding the involvement of interface partners.

4. Certify systems as being tested on year-2000-compliant mid-tier computers.

DFAS Comments. DFAS concurred with the recommendation, and as of June 4, 1999, DFAS stated that each of the 17 DFAS systems reviewed were certified as Y2K compliant. In further discussions, DFAS indicated that all of the systems were now implemented, as well.

Appendix A. Audit Process

This report is one in a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DFAS efforts to address the Y2K computing challenge. For a listing of audit projects addressing the issue, see the Y2K web page at http://www.ignet.gov.

Scope

This audit included reviews of DFAS mid-tier computer systems. As of March 1, 1999, DFAS reported that it had 33 systems using mid-tier computer systems. We selected 17 of those systems managed by DFAS or DISA.

We applied criteria outlined in the "DoD Year 2000 Management Plan," version 2.0, December 1998, and the DFAS Y2K Management Plan, December 1997, version 1.0, to assess the progress achieved by DFAS toward reducing the risk of a Y2K failure.

We reviewed DFAS and DISA Y2K databases and inventories of mid-tier computer systems. Also, we held discussions with DFAS and DISA managers to identify the locations and types of mid-tier computer systems used to process DFAS data.

DoD-Wide Corporate-Level Government Performance and Results Act Goals. In response to the Government Performance and Results Act, DoD has established 6 DoD-wide corporate-level performance objectives and 14 goals for meeting the objectives. This report pertains to achievement of the following objective and goal.

> **Objective:** Prepare now for an uncertain future. **Goal:** Pursue a focused modernization effort that maintains U.S. qualitative superiority in key warfighting capabilities. **(DoD-3)**

DoD Functional Area Reform Goals. Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to achievement of the following functional area objectives and goals.

- **Information Technology Management Functional Area.** **Objective:** Become a mission partner. **Goal:** Serve mission information users as customers. **(Information Technology Management-1.2)**

- **Information Technology Management Functional Area.** **Objective:** Provide services that satisfy customer information needs. **Goal:** Modernize and integrate Defense information infrastructure. **(Information Technology Management-2.2)**

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- **Information Technology Management Functional Area.**
  Objective: Provide services that satisfy customer information
  needs. **Goal:** Upgrade technology base. **(Information
  Technology Management-2.3)**

General Accounting Office High-Risk Area. The General Accounting
Office has identified several high risk areas in DoD. This report provides
coverage of the Information Management and Technology high-risk area.

Methodology

Audit Type, Dates, and Standards. We performed this program audit
from November 1998 through March 1999, in accordance with auditing
standards issued by the Comptroller General of the United States, as
implemented by the Inspector General, DoD. We used nonstatistical
sampling methods, and we did not use computer-processed data for this
audit.

Contacts During the Audit. We visited or contacted individuals and
organizations within DoD. Further details are available upon request.

Management Control Program. We did not review the management
control program related to the overall audit objective because DoD
recognized the Y2K issue as a material management control weakness area
in the FY 1998 Annual Statement of Assurance.

Appendix B. Summary of Prior Coverage

Forty-nine Inspector General, DoD, reports covered issues related to this audit.

Inspector General

Inspector General, DoD, Report No. 99-086, "Year 2000 Issues Within the U. S. Pacific Command's Area of Responsibility – III Marine Expeditionary Forces," February 22, 1999.

Inspector General, DoD, Report No. 99-085, "Year 2000 Issues Within the U. S. Pacific Command's Area of Responsibility – Hawaii Information Transfer System," February 22, 1999.

Inspector General, DoD, Report No. 99-082, "Year 2000 Computing Issues Related to the Defense Automatic Addressing System Center," February 18, 1999.

Inspector General, DoD, Report No. 99-081,"Tooele Chemical Agent Disposal Facility Preparation for Year 2000," February 16, 1999.

Inspector General, DoD, Report No. 99-079, "Year 2000 Conversion Program at the Dugway Proving Ground Major Range and Test Facility," February 9, 1999.

Inspector General, DoD, Report No. 99-076, "Year 2000 Posture of DoD Mid-Tier Computer Systems," February 3, 1999.

Inspector General, DoD, Report No. 99-074, "Year 2000 Conversion at the Atlantic Fleet Weapons Training Facility," January 29, 1999.

Inspector General, DoD, Report No. 99-070, "Year 2000 Conversion Program at Hill, Patrick, Holloman, and Vandenberg Air Force Bases," January 22, 1999.

Inspector General, DoD, Report No. 99-063, "Global Positioning System Receiver Compliance with Year 2000 Requirements," December 31, 1998.

Inspector General, DoD, Report No. 99-060, "Johnston Atoll Chemical Agent Disposal System Preparation for Year 2000," December 24, 1998.

Inspector General, DoD, Report No. 99-058, "Year 2000 Conversion of Defense Critical Suppliers," December 18, 1998.

Inspector General, DoD, Report No. 99-055, "Year 2000 Computing Issues Related to Health Care in DoD," December 15, 1998.

Inspector General, DoD, Report No. 99-052, "Year 2000 Conversion of Logistics and Maintenance Systems in Support of the Airborne Warning and Center System," December 11, 1998.

Inspector General, DoD, Report No. 99-049, "Year 2000 Contingency Planning and Cost Reporting at the Defense Finance and Accounting Service," December 10, 1998.

Inspector General, DoD, Report No. 99-046, "Year 2000 Initiatives at the Army Kwajalein Missile Range," December 4, 1998.

Inspector General, DoD, Report No. 99-039, "552nd Air Control Wing Year 2000 Infrastructure Program for the Airborne Warning and Control System," November 23, 1998.

Inspector General, DoD, Report No. 99-038, "Year 2000 Initiatives at the Pacific Missile Range Facility," November 23, 1998.

Inspector General, DoD, Report No. 99-036, "Army Research Laboratory Preparation for the Year 2000," November 13, 1998.

Inspector General, DoD, Report No. 99-035, "Army Medical Research Institute of Infectious Diseases Preparation of the Year 2000," November 13, 1998.

Inspector General, DoD, Report No. 99-034, "Management of the On-Site Inspection Agency Year 2000 Program," November 12, 1998.

Inspector General, DoD, Report No. 99-031, "U. S. Pacific Command Year 2000 Issues," November 3, 1998.

Inspector General, DoD, Report No. 99-030, "Management of the Defense Technology Security Administration Year 2000 Program," November 3, 1998.

Inspector General, DoD, Report No. 99-028, "Management of the Defense Special Weapons Agency Year 2000 Program," October 30, 1998.

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Appendix C. Glossary

Application Program. An application program is a computer program to help people perform a certain type of work. Depending on the work for which it was designed, an application can manipulate text, numbers, graphics, or a combination of those elements.

Computer Hardware. Computer hardware is the physical components of a computer system, including the central processing unit, and peripherals, such as printers, tapes, and disks.

Mission-Critical Systems. Mission-critical systems include the following:

- systems defined by the Information Technology Management Reform Act (Clinger-Cohen Act) as National Security Systems (intelligence activities, cryptologic activities related to national security, command and control of military forces integral to a weapon or weapon systems, systems critical to direct fulfillment of military or intelligence missions);

- systems identified by the Commanders-in-Chief that, if not functional, would preclude the Commanders-in-Chief from conducting missions across the full spectrum of operations; and

- systems required to perform Department-level and DoD Component-level core functions.

Testing. Testing consists of actions to determine whether the results generated by the information systems and their components are accurate and whether the systems perform to specifications.

Appendix D. Defense Finance and Accounting Service Systems Selected for Review

We reviewed the following systems that used mid-tier computers to process DFAS data.

1. **Computerized Accounts Payable System for Windows.** The Computerized Accounts Payable System for Windows is the newest version of the Computerized Accounts Payable System software. The system processes installation and center-level vendor payments for the Army and the Defense Logistics Agency. Also, it processes International Merchant Purchase Authority Card payments for the Marine Corps. The system is processed on two mid-tier computers, and it was built Y2K compliant. It was implemented on March 31, 1999.

2. **Defense Business Management System.** The Defense Business Management System is critical to accomplishing the DFAS mission. It is the accounting system for the Defense Working Capital Fund in support of DFAS, the Defense Commissary Agency, the Air Force Materiel Command, and Naval Supply. It has four major subsystems—personnel, payroll, resource administration, and appropriation accounting—and processes on one mid-tier computer. The Defense Business Management System was implemented by March 31, 1999.

3. **Departmental Financial Reporting and Reconciliation System.** The Departmental Financial Reporting and Reconciliation System is the general accounting system responsible for cash accountability, expenditure reporting, and reconciliation for all appropriations. One module of the system, the Cross-Disbursing module, is processed on one mid-tier computer. The remainder of the system is on a mainframe computer. The system is in the implementation phase, with the Cross-Disbursing module scheduled to be replaced in April 1999, and the entire system scheduled to be implemented by July 31, 1999.

4. **Defense Joint Accounting System.** The Defense Joint Accounting System is the general fund accounting system for DFAS Indianapolis and DoD agency customers. The Defense Joint Accounting System's software was obtained from the Army Corps of Engineers Financial Management System. The Defense Joint Accounting System was operational at its first customer site, the Ballistic Missile Defense Organization. The system was being developed to process on a mid-tier computer.

5. **Defense Working Capital Accounting System-Defense Automated Printing Service.** The Defense Working Capital Accounting System-Defense Automated Printing Service is a mission-critical system and a migratory system to replace the Defense Automated Printing Service's Printing Resource Management Information System. The Defense Working Capital Accounting System-Defense Automated Printing Service was fielded in October 1998 and runs on a mid-tier computer at the DISA Megacenter at Warner-Robbins Air Force Base in Georgia.

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6. Defense Working Capital Accounting System-Public Works Centers.
The Defense Working Capital Accounting System-Public Works Centers is considered a mission-critical system to replace the Naval Facilities Engineering Command's Public Works Center Management Information System. The working capital and general fund accounting support was to be transferred to the Defense Working Capital Accounting System-Public Works Centers from the Naval information system. The Defense Working Capital Accounting System-Public Works Centers is processed on one mid-tier computer at the DISA Megacenter in San Diego, California.

7. Financial Management System. The Military Traffic Management Command's worldwide Financial Management System is critical to the DFAS mission. It is a dedicated, online, interactive finance and accounting system processing "For Official Use Only" information. It supports the Military Traffic Management Command transportation operations associated with Transportation Working Capital Funds and appropriated funds. It performs finance and accounting functions and produces finance and accounting reports. The system is processed on three mid-tier computers and was implemented on January 19, 1999.

8. Industrial Fund Accounting System. The Industrial Fund Accounting System, a mission-critical system, processes information for the Defense Working Capital Fund. It consists of three subsystems—accounting, budget, and data collection. The budget subsystem is processed on both mid-tier and mainframe computers, and the accounting and data collection subsystems are on a mainframe computer. The Industrial Fund Accounting System was implemented on March 1, 1999.

9. Standard Materiel Accounting System. The Standard Materiel Accounting System is designated as mission-critical and as an interim migratory Defense Working Capital Fund system that provides retail financial accounting support to the Air Force retail supply management business area. The system is processed on one mid-tier computer. It was implemented on May 20, 1999.

10. Standard Accounting and Reporting System. The Standard Accounting and Reporting System is a mission-critical system developed for the Department of the Navy to consolidate all of its general fund accounting, commercial, and reporting operations. It is a standardized financial management and automated accounting data processing system. The subsystem reviewed in this audit—the Automated Prevalidation Subsystem—is processed on one mid-tier computer and is scheduled to be moved to a mainframe computer in mid-year 1999. The Standard Accounting and Reporting System was implemented by March 31, 1999.

11. Transportation Support System. The Transportation Support System processes invoices; Government bills for personal property, household goods, and freight; and commercial bills for the Navy, and it provides data to the Standard Accounting and Reporting System. The system is processed on one mid-tier computer, and it was implemented on March 29, 1999.

Mechanization of Contract Administration Services System. The Mechanization of Contract Administration Services system is a mission-critical system managed by the Defense Logistics Agency. The system was implemented on January 19, 1999. It processes on a mainframe computer, and although it was not part of this audit because the audit was limited to reviews on DFAS systems, it interfaces with the following six DFAS systems. (These six DFAS systems operate on Hewlett Packard mid-tier computers.)

12. Prevalidation Management Information Reporting System. The Prevalidation Management Information Reporting System provides management reports on invoices requiring prevalidation. Also, it extracts data from the Mechanization of Contract Administration Services system and the Payment Prevalidation Module to provide the status on invoices. The system is capable of providing standardized and nonstandard reports.

13. Unmatched Disbursement Reconciliation System. The Unmatched Disbursement Reconciliation System interfaces with the Elimination of Unmatched Disbursement System to validate that funds are available at the local accounting offices. That information is sent to the Prevalidation Management Information Reporting System for validation of proposed payments.

14. Entitlement Automation System. The Entitlement Automation System automates the manual payment process for contract entitlements. The system allows users to view contract information extracted from the Mechanization of Contract Administration Services system. Also, it automates the input of payment data into the Mechanization of Contract Administration Services system.

15. Electronic Document Management Program. The Electronic Document Management Program is used to scan documents and to provide users with on-line access to financial documents and information. Also, it improves customer services, and it ensures the use of consistent business processes. The system was designed to eliminate paper, reduce costs, and improve service.

16. Contractor Invoice Service. The Contractor Invoice Service provides contractors with the ability to perform inquiries on the status of their invoices in the Mechanization of Contract Administration Services system.

17. Contract Reconciliation System. The Contract Reconciliation System facilitates the reconciliation of contracts in the Mechanization of Contract Administration Services system.

Appendix E. Defense Finance and Accounting Service Systems on Mid-Tiers

Title of DFAS System	DISA Inventory				DFAS Inventory	
Date of Inventory:	1/4/99	1/26/99	2/10/99		11/24/98	3/1/99
Automation of Procurement & Accounting Data Entry	X	X	X			
Automated Time, Attendance and Production System – Windows						X
Base Accounts Receivable System					X	X
Computerized Accounts Payable System	X	X	X			
Computerized Accounts Payable System (Windows Version)					X	X
Centralized Disbursing System						X
Corporate Electronic Funds Transfer	X	X	X			X
C Goal Workload Code	X	X				
Contract Reconciliation System						X
Defense Business Management System-Automated Billing System	X	X	X		X	
Defense Business Management System Mid-Tier Interface 8 5	X	X	X			
Defense Business Management System						X
Defense Cash Accountability System	X	X	X		X	X
Departmental Cash Management System					X	X
Departmental Data Base					X	
Defense Departmental Reporting System					X	X
Departmental Financial Reporting & Reconciliation System – Cross Disbursing	X	X	X		X	X
Defense Joint Accounting System					X	X
Defense Property Accountability System					X	
Defense Procurement Payment System					X	X
Defense Transportation Payments System –Accounting						X
Defense Working Capital Accounting System-Public Works Centers	X	X	X		X	X
Defense Working Capital Accounting System-Defense Automated Printing Service					X	
Defense Standard Disbursing System						X
Entitlement Automation System	X	X	X			X
Electronic Document Access	X	X	X			X
Electronic Document Access/Indexing	X	X	X			
Electronic Data Interchange/810	X	X	X			X
Electronic Document Management Program						X
Financial Reporting System					X	
File Tracking System						X
General Accounting and Finance System- Defense Travel System						X
Garnishment Support System - Integrated Garnishment Subsystem			X			X
Integrated Automated Travel System					X	
Industrial Fund Accounting System						X
Integrated Garnishment System	X	X				
Information Transaction Router	X					
Military Traffic Management Command-Financial Management System						X
Navy Automated Transportation Data System					X	
On-Line Reports System	X	X	X		X	
Pass Thru	X	X				
Program and Budget Accounting System- Funds Distribution					X	
Prevalidation Management Information Reporting System						X
Performance Measurement Indicators System						X
Standard Materiel Accounting System	X	X	X			X
Standard Accounting and Reporting - Automated Prevalidation Subsystem	X	X	X			X
Resource Analysis Decision Support System						X
Tax Machine Readable Input						
Transportation Support System	X	X	X			X
Uniform Automatic Data Processing System - Stock Point applications E and F					X	
Unmatched Disbursement Reconciliation System	X	X	X			X
Work Year and Personnel Cost						X
Total Number of DFAS Systems	21	20	18		19	33

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Appendix F. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)
   Deputy Chief Financial Officer
   Deputy Comptroller (Program/Budget)
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
   Deputy Chief Information Officer and Deputy Assistant Secretary of Defense (Chief
      Information Officer Policy and Implementation)
      Principal Director for Year 2000
Director, Defense Logistics Studies Information Exchange

Department of the Army

Inspector General, Department of the Army
Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Inspector General, Department of the Navy
Auditor General, Department of the Navy
Inspector General, Marine Corps

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Inspector General, Department of the Air Force
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Finance and Accounting Service
Director, Defense Information Systems Agency
   Inspector General, Defense Information Systems Agency
   United Kingdom Liaison Officer, Defense Information Systems Agency
Director, Defense Logistics Agency
Director, National Security Agency
   Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency
Commandant, Defense Systems Management College

Non-Defense Federal Organizations

Office of Management and Budget
Office of Information and Regulatory Affairs
General Accounting Office
 National Security and International Affairs Division
  Technical Information Center
 Director, Defense Information and Financial Management Systems, Accounting and
  Information Management Division

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
Senate Special Committee on the Year 2000 Technology Problem
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Management, Information, and Technology,
 Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International
 Relations Committee on Government Reform
House Subcommittee on Technology, Committee on Science

Defense Finance and Accounting Service Comments

DEFENSE FINANCE AND ACCOUNTING SERVICE

1931 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22240-5291

JUN 4 1999

DFAS-HQ/S

MEMORANDUM FOR DIRECTOR, FINANCE AND ACCOUNTING DIRECTORATE,
OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF
DEFENSE

SUBJECT: Audit Report on Year 2000 Posture of Mid-Tier Computer
Systems Processing at Defense Finance and Accounting
Service (Project No. 9FG 9009)

This memorandum is in response to the Department of Defense
(DoD), Inspector General's (IG) draft report after review of the
Defense Finance and Accounting Service (DFAS) Mid-Tier Computer
Systems Processing. DFAS's responses to the DoD IG
recommendations are as follows: Additional comments and
clarifications are attached.

1. Periodically reconcile and update the Defense Finance and
   Accounting Service inventory of systems that operate on mid-
   tier computers with the Defense Information Systems Agency
   Inventory. Concur. DFAS has been working with DISA to
   reconcile and update our inventories. This is an ongoing
   effort and records will be updated on a periodic basis.

2. Develop test plans for systems operating on mid-tier
   computers, including plans for testing interfaces as follows:
   (a) Standardize testing procedures to promote consistency and
   completeness in the testing process (b) Develop test plans and
   conduct tests for untested systems, or (c) Compare actual test
   results with expected results to determine if tests were
   successful, if the tests were unsuccessful, conduct additional
   testing until desired results are achieved. Partially concur.
   Test plans were updated based on the audit results; however,
   trying to standardize testing procedures at this late date
   would not have the intended effect since all of the mid-tier
   systems have already been tested and certified. Action is
   completed.

3. Revise contingency plans to include cost estimates and the
   involvement of system users or managers that have interfaces
   with the Defense Finance and Accounting Service systems using
   mid-tier computers. Non-Concur. DFAS disagrees with the
   recommendation regarding cost estimates. Action is completed.

4. Certify systems as being tested on Year 2000 compliant mid-
   tier computers. Concur. All DFAS systems will be certified
   for Y2K compliance. Action is completed.

Any questions regarding this response can be directed to Sharon Brustad, DFAS-HQ/SB, on (317) 510-5647.

C. Vance Kauzlarich
Director, Information and Technology

Attachment

DFAS is confident that its mid-tier computers and systems will be Y2K compliant. All of the 17 systems reviewed have been certified as Y2K compliant. The following are comments or clarifications to the DoD IG draft report.

1. Reconciling and Updating the Inventory of Systems. Almost all of the inventory mismatches were caused by non-DFAS systems being included on the list and DISA reporting subsystems while DFAS reported at the system level. DFAS and DISA are working to update the inventories.

The two systems the audit refers to as missing from the DFAS inventory are the Electronic Document Management System (EDMS) and the Contractor Invoice Inquiry System (COINS). EDMS is on the DFAS Inventory as the Electronic Document Management Program. COINS is not on the DFAS Mid-tier Inventory because it is not really a mid-tier system. COINS is a PC based bulletin board residing on an 80486 file server with 32 incoming phone lines run out of the DMC.

2. Plans for Testing DFAS Systems Using Mid-Tier Computers Seven systems were listed as not having an adequate test plan.

   a. Military Traffic Management Command-Financial Management System (MTMC-FMS) The Department of Army, Military Traffic Management Command developed and executed the test plan for this system. MTMC-FM was audited, including a review of the test information, and certified at DoD Level 2.

   b. Defense Business Management System (DBMS). The auditor's looked at the mid-tier processes as a stand-alone function instead of a subsystem of DBMS. DFAS believes tha testing must encompass the entire process, not just that portion performed on a mid-tier application. Therefore, testing included mid-tier and mainframe processes, because the general ledger updates occur only in the mainframe environment. While it is true that there were no specified expectations for the mid-tier processes themselves, the transactions were followed all the way through to the general ledger. Although the auditor's indicated in the body of the report that DBMS did not compare actual results achieved in the test to the expected result, DFAS believes that its test team did perform this function.

   c. Five of six systems interfacing with the Mechanization of Contract Administration Services system. All six DFAS systems performed System Acceptance Testing utilizing specific test conditions developed based on the certification checklist and the users knowledge of the systems use of dates. All systems were tested by programmers in a System Integration Test (SIT) and independently tested in a System Acceptance Test (SAT) by functional DFAS personnel. As a result of the DoD-IG Audit, the DFAS systems managers recognized the need for formal test plans to satisfy external reviews of their Y2K efforts and have subsequently developed formal test plans.

3. Planning for Y2K Contingencies. DFAS has identified estimated additional costs associated with preventive contingency actions related to Y2K. These costs were submitted to C3I in

October 1998. In March 1999, these costs were revised and resubmitted based upon OUSD
© approved changes inY2K contingency plans (e.g., contingency planning for printing
checks for 25 percent versus 100 percent of EFT payments) which reduced the costs
dramatically. *We have also established cost account codes and job order numbers to assist
with tracking of expenses associated with actions related to contingency plans including
preparing for contingency check printing, pre-positioning of payments, zero day preparations
and actions, and live testing of contingency plans.*

a. We do not believe it is critical to identify costs for "each" potential contingency operation
   and that revising contingency plans to include these cost estimates has very little practical
   value. Early in the planning process DFAS attempted to identify costs for each contingency
   plan (not each contingency) during risk assessment phase. We quickly found costs were not
   included in most assessments and for those assessments with estimated costs the information
   was usually not reliable or ver generic. We explored improving the cost estimates by
   standardizing and providing criteria, such as setting the parameters and defining scope.
   However, we quickly realized the infinite number of contingency situations and unknowns
   made developing reliable cost information almost impossible. Also, developing such costs
   provided little added value for DFAS because of the way contingency operations have been
   funded in the past. Historically DoD, including DFAS, does not fund contingency operations
   before actual costs are incurred. Also DFAS operates with a working capitol fund rather than
   appropriated funds. Most of DFAS' contingency costs are related to operational costs such
   as salaries and overtime rather than purchasing or procurement of equipment. Therefore,
   DFAS incurs the cost necessary to keep it in operation and then incorporates increased costs
   in computing future billings to our customers. On rare occasions, OUSD © has provided
   DFAS with additional appropriated funds to cover contingency operations, but this is after
   they are accrued. Therefore, it was determined our limited resources could best be used
   elsewhere in the planning process.

   Note: The audit report on page 5, section titled <u>Planning for Y2K Contingencies</u> states,
   "Also, the DoD Y2K Management Plan requires cost estimates to be developed for each
   contingency and information on contingencies are exchanged with systems users and
   managers of interfacing systems." We could not find the reference to the cost
   requirements in the DoD Y2K Management Plan. We contacted the DoD Y2K office
   responsible for this document on May 26, 1999. Initially, they could not locate the
   reference and over the phone stated they agreed it was not a practical requirement.

b. Regarding the comment "information on contingencies be exchanged with system users and
   managers of interfacing systems", we recognize more can be done. However, we have
   accomplished several initiatives and many more are underway to disseminate information
   regarding our contingency plans to our critical trading partners including the system users
   and managers of interfacing systems. This includes providing presentations on our
   contingency plans to most of the military services and DISA. Also, we have posted to our
   web site the DFAS overarching contingency plan, which lists our contingency strategies for
   Y2K. We continuously encourage the business mangers and system managers to contact
   their critical trading partners and exchange information regarding contingency plans. We are
   encouraging business managers to include their key trading partners in the testing of their

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contingency plans during our internal live testing, as well as during CJCS exercises. We intend to make a special effort to emphasize to our mid tier system managers the importance of coordinating and providing information to their interfacing partners.

4. <u>Certifications of Systems as Y2K Compliant</u>. The statement that DFAS was not planning to certify the Defense Business Management System (DBMS) and that the system would move to end-to-end testing without being certified is incorrect. DBMS was certified on a compliant platform on March 24, 1999.

5. <u>Y2K Certifications in DFAS Managers' Checklists versus DFAS Y2K Monthly Status Report</u>. The DFAS Y2K Project Officer updates the certification information on the DFAS Y2K report after she has reviewed and accepted the certification. This process ensures the accuracy of the data used by DoD to report to the Office of Management and Budget. The inconsistencies that existed between the levels of Y2K certification shown in the checklists completed by DFAS managers and the DFAS Y2K monthly status report are explained below.

    a. Checklist showed DFAS Level 2 and Monthly Report showed DFAS Level 3.

(1) Several DFAS systems tested on a compliant platform and certified before DFAS Level 3 was established. To document that those systems were truly level 3, a special one-page certification was added to the existing Level 2-certification checklist. The Level 2 certifications for the Defense Working Capital Accounting System (both Defense Automated Printing Service and Public Works Centers), Entitlement Automation System, and Prevalidation Management Information Reporting System fall in this category.

(2) The Military Traffic Management Command-Financial Management System documentation attaining a Level 2 certification refers to the DoD Level 2 not the DFAS Level 2. The original certification was done at a DoD Level 3 (self-certification) and was redone at DoD Level 2 (Audited) to meet the requirement for Mission Critical system to be certified at DoD Level 1 or 2.

    b. Checklist showed different alpha level (a or b) than the monthly report.

(1) When the DFAS Certification Guidance was updated to include the new levels 1a, 1b, 2a, and 2b, the following note was included: "These levels are based on the DoD Year 2000 Management Plan For Signature Draft Version 2.0. Currently the letters representing the size of the year fields are inconsistent since "a" represents 2-digit years for levels 1 and 2 and "b" represents 2-digit years for level 3. DFAS has requested the numbering scheme be changed so that "a" always represents 4-digit years and "b" always represents 2-digit years. If the levels are changed in the DoD Year 2000 Management Plan, this guidance will be adjusted to comply with the change." The final version of the DoD Year 2000 Management Plan did reverse the levels; therefore, the letters had to be adjusted for any DFAS system that had already certified.

    c. The Industrial Fund Accounting System was certified at a DoD Level 1b. We are unsure where the "3a" came from.

d. The audit report states "The DFAS monthly report indicated two systems operating on mid-tier computers were Y2K compliant, but, were not certified as having been tested on a Y2K compliant mid-tier computer. Those two systems were the Unmatched Disbursement Reconciliation System and the Standard Accounting and Reporting System." Both systems were tested and certified: UDRS on March 24, 1999 and STARS on March 30, 1999.

e. The 10 systems listed under the title "Mechanization of Contract Administration Services Subsystems" are not subsystems of MOCAS. The title should be changed to "MOCAS Interfacing Systems" and the 6 interfacing systems should either be indented or moved to the end of the list to distinguish them from the remaining systems.

6. Implementation of Mission-Critical Systems. The Standard Materiel Accounting System, which was the only mission critical system that had not been implemented at the time of the DoD IG review, was implemented on May 20, 1999.

a. Of the four non-mission critical systems that hadn't been implemented at the time of the review, two have been implemented: Computerized Accounts Payable for Windows (4/15/99) and Contract Invoice Service (5/12/99). The mid-tier piece of the Departmental Financial Reporting and Reconciliation System is scheduled for replacement by July 31, 1999. The Defense Joint Accounting System is a developmental system that has been implemented at a prototype site.

Audit Team Members

The Finance and Accounting Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report.

F. Jay Lane
Kimberley A. Caprio
Dennis L. Conway
Cynthia G. Williams
Jacqueline J. Vos
Margaret B. Bennardo
Karen L. Jones
Noelle G. Blank